

structural Gibraltar, the great Ende Bridge, over which a half-dozen trunk lines or rail-roads enter St. Louis.

The great gray buttresses, the commanding tower and the massive spans to the eastern approach were demolished, and as completely as though they had been attacked at short range by siege guns, dropping for an instant into the yellow waters of the Mississippi, but remaining there long enough to scour the wharves and send to the bottom the steamers and barges moored at the docks.

The Ruins in Flames.

The storm cloud roared into East St. Louis and lifted the air with the wreckage of a thousand houses. Flames then sprang from the ruins on either side of the river and crimsoned the swirling cloud. Within an hour the fire alone destroyed a half-million dollars' worth of property in the two cities and blackened the bodies of many who had been caught by the falling buildings.

Scores of persons were drowned, or, after being killed on the land, were blown into the water. Steamers were blown high on the banks. Others were turned around. Still others, after being torn from their moorings, disappeared and have not been heard from. As a rule the smaller craft were sunk.

Not while within the city limits did the funnel-shaped clouds rise and fall from the ground, as is usually the case with tornadoes in small places. There was no rebounding, and, consequently, whatever was in the path of the wind was either destroyed or badly injured.

Searching for the Bodies.

Scores of mangled bodies still remain under the heaps of wreckage in the streets of St. Louis, and through the web of tangled wires the car of the dead horse passed to and fro, awaiting the grim signal of the men who are digging in the ruins.

The Morgue is filled with the dead. There is not an empty cot in all the hospitals of the city. Before the Morgue at Twelfth and Spruce streets thousands of people, held in check by ropes strung by the police, have been passing in single file through the corridors and staring at the distorted faces of the victims of the awful blast.

At 4 p. m. over eighty bodies had been brought to the Morgue, and ambulances, with white-helmeted policemen on the seats, were constantly bringing in more victims of the tornado. Nobody in the distracted city can give a reasonable approximate estimate of the loss of life.

Coroner Wade's Figures.

The actual estimate of the horror will not be known until the miles and miles of brick and mortar have been cleared from the streets. From Belleville, in Illinois, and Mexico, Clayton, Wisconsin and Moberly, in Missouri, come reports of loss of life, and it is estimated by Coroner Wade that the tornado killed nearly a thousand people and injured between two and three thousand others.

The storm was the most unique of its kind. The territory of its visitation cast, west, north and south will not be known for several days. In St. Louis the wind blew from the south, and men hurrying through the streets braced themselves against it. In an instant the current came off their feet before they were aware of the change.

Then the darkness of an Egyptian tomb enveloped the city. The artificial lights of the streets and stores were snuffed as by some supernatural power. There was a roar more frightful than that of a thousand cartrucks. Crash followed crash. Great buildings crumbled and strained, and there could be felt crying through the air hurrying objects that could not be seen.

Mingled with the crashing of bodies of masonry was the cracking of glass like the snap of musketry amid a bombardment of great guns. All this within a few minutes, and then twilight and calm made up the scene.

A Terrible Scene.

And what a scene! Not until this morning was the extent of the calamity apparent. The citizens who had not thought of sleep all through the night as they groped their way over the trunks of fallen trees and through meshes of tangled wires, urged on by the groans and cries of scores of victims planed beneath crumbled walls and under masses of joists and rafters, looked upon a waste that they will never forget.

Incidents, a few amusing, but for the most part with sad, fearful realities, are to be found at every turn. Perhaps the saddest of the well-known well-known people is that connected with the death of Judge Fouke, of the Circuit Court, sitting at East St. Louis.

The trial of an important case had just been finished as the premonitory wind began to blow. The old courthouse rocked a bit, but it had done so many times before, and Judge Fouke paid little attention to it. The jury, however, became very uneasy, and before being charged begged of Judge Fouke to discharge them.

Left the Building in Time.
This was at variance with all customs; yet when the venerable jurist saw the look of fear which seemed to prevail in the jury box he decided to let them go. As the twelve men filed out of the room the old building began to rock perceptibly, and not over five minutes later the cyclone had done its worst and the structure was a mass of debris. Had not the kind-hearted old Judge complied with the request of the jury it is safe to say that every man in that building would have been killed outright, so complete was the destruction.

Judge Fouke was the last man to leave the Court House, Judge Hope, of Alton, who sits on the Senate Bench, preceding him by a couple of minutes. Judge Fouke made his way as best he could through the blinding rain to the relay depot. While standing there, in what he considered a safe shelter, a huge piece of timber was blown through the air, striking him on the head and killing him instantly.

Such confusion prevailed about the station that the body was allowed to lie on the platform for several minutes before it was picked up and carried to a place of safety. Judge Hope, instead of accompanying Judge Fouke to the station, hurried to the Marshall House, where he was stopping. He arrived just before the building was struck, and was inside when the crash came, but was unharmed, the only occupant of the hotel who was not either killed or seriously injured. Judge Fouke was one of the best known jurists in this section, and had served on the bench for nearly twenty years.

Her Babies and Sister Killed.
Mrs. Horace Trump saw her two children and her sister crushed to death, but escaped with her own life by almost a miracle. Mrs. Trump was sitting at the

bedside of her sick sister, holding her year-old baby in her arms and carefully watching her four-year-old daughter playing about the house when she saw the storm approaching. She had seen the black clouds before, and she well knew their import, but before she had time to remove her babies or protect her sister the storm broke in awful fury.

The first flying missile felled her to the floor, then came the walls burying all four. The two children and the sick sister were killed outright, but a broad board falling directly over Mrs. Trump saved her from the heavy weight above, and four hours later she was rescued and taken to the City Hospital.

While the rescuers were at work on a building on Missouri avenue about 1 o'clock this morning they came upon the dead bodies of two infants, and upon removing them they discovered the mother pinned in such a position that it would require several hours to release her. She was barely able to speak, but believing that the lives of her children might yet be spared, she implored the rescuers that they devote all their energies to saving them and "not to mind her until they were safe."

The babies were as carefully removed as if alive, and after being taken out of the mother's sight the rescuers returned to her. It was two hours or more before the debris could be removed enough to extricate the woman, but during all that time she watched the work of the men, and when finally placed on a stretcher she muttered her thanks repeatedly. She said her name was Warner, and that she lived at Litchfield, Ill., and begged that word be sent to her husband.

City Hospital Wrecked.

The City Hospital was wrecked. Three were killed there outright, and the list of injured is long. Seventy-five are missing, buried in the ruins. Even those who might otherwise have escaped to tell their story, may die of the diseases that took them to the hospital before they can be dug out of the debris.

Dr. Starkhoff believes that the death list among patients from this reason alone will be a dozen. Doctors and nurses were at work among the suffering when the disaster struck, and the building for a moment All went down in a few minutes, though many escaped, warned in time by the creaking and swaying of the walls. Lights were out, the darkness was that of a cave, but when daylight came it revealed a pile of debris from which screams and groans came.

The greatest devastation was in the vicinity of Lafayette Park. The fashionable residences surrounding it are wrecked. Lafayette avenue, Park, Mississippi and Chicago avenues are filled with wreckage of palatial houses. Roofs were lifted and dropped to the streets. But the loss of life here was not large. Further east breweries, houses and manufacturing plants of all kinds were leveled, and streets are impassable except on foot.

No words can tell the horror of the scene near Seventh and Rutgers streets. One tenement containing thirteen families, went down, burying all in the tons of brick. The firemen did their work by the light of lanterns dimming, every now and again turning the dull glow of the light on the torn and bloody faces of some crushed man. Three brothers, Thomas, Harry and William Killian, all under twelve years, were found together in a heap, dead. Similar scenes took place at other ruined tenements.

Greatest Damage in East St. Louis.

The greatest damage was done on the east side of the river, in East St. Louis. It will be several days at least, before the list of dead and injured can be completed, though active search is going on for bodies, and men have been put into squads and relays that the work may be done more rapidly and effectively.

The death list is being added to every hour, and a conservative estimate of the list of dead is two hundred. It may be much more.

The list of injured is appalling, embracing as it does many that cannot survive their hurts. It will run far into the hundreds, and never will be known exactly, as not half of those hurt will make reports to the authorities.

The property loss is certainly \$2,000,000, much of which is due to the fire that followed the tornado. A large part of the town is composed of frail wooden buildings, and when these were crushed like shells, fires from stoves, furnaces and gas jets blazed away as in piles of kindling wood. The fire department would have been almost helpless before such a vast amount of work under ordinary conditions, but under these trying circumstances, some of the firemen killed, many injured, horses in a state of panic, the whole town wild, almost no work could be done with the flames. Not a boat was left floating in the river able to carry fire engines across from this city, though Chief of the East St. Louis Police, J. T. Martineau, sent an appeal for help. The burned district embraced fire blocks, but single fires, the aggregate of whose damage was great, were scattered about the city.

The Town Demolished.

So much for a brief statement of the amount of damage in East St. Louis. The town is practically demolished. It had no elegant buildings to speak of, but it was a hive of industry. The town is on level ground, the streets wide, and the houses low, so that the storm had an open chance to do its worst. It is a railroad center, many lines converging there from all parts of the East, to cross one of the bridges over the Mississippi to get into St. Louis. The railroad yards were extensive, with tracks numerous, and almost always hundreds and hundreds of cars stood about, easy prey to such a storm as this. One of the leading industries of the town is connected with the stock yards.

Perhaps the most impressive evidence of the fury and strength of the storm is to be found at the Eads Bridge, at the eastern end. There the wind had to do with massive masonry, but it tore it off in chunks, hurrying pieces along as though they had been torn from bales of cotton. Tons of the masonry, beginning with the massive eastern pier, and extending to the foot of the incline, were tumbled down. The storm cut

off the upper part of the structure as if it had been a flimsy treacle. Instead of a structure of wide-wide frame for massive masonry, what the tornado did with the Eads Bridge can hardly be believed until eyes have seen it.

The larger part of the central portion of the city is razed to the ground. On the east along the river bank to the north of the Eads Bridge not a house is left standing. In this latter portion the loss of life was terrible. Scarcely a family seems to have escaped the loss of at least one member, and some whole families have been wiped out of existence. The frail buildings and the fatness of the landscape gave the wind every chance, and its path was marked by a mass of debris, burying bodies by scores, fire following to make the horror complete. The waterworks were demolished, and the men were forced to do the best they might as a bucket brigade.



VANDALIA FREIGHT OFFICE AT EAST ST. LOUIS.

This building contained fifteen clerks when the cyclone struck it. The structure was blown to pieces like a house of cards. Every person in it was killed except four, and they were seriously injured.

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Hotel as a Hospital.

The Tuttle House, Third street, was like a hospital last night. In one room upstairs William Cogan, one of the best known members of the Brotherhood of Locomotive Engineers, was in a barber shop at Third street and Missouri avenue when the storm came up. The building was completely wrecked and the half-dozen people inside were buried. Cogan worked his way out without assistance, though seriously injured.

One room at the Tuttle House was occupied by three young women. One of them, Maggie Herbert, of Washington, Ind., said: "I was in the dining room of the Tremont House when the storm occurred. A portion of the room blew off and a half dozen of us ran to get out of the way of flying boards and bricks. We ran into the kitchen and back into the dining room, and finally the whole house fell in. Mrs. Hays, the landlady, and two or three others were killed and the rest of us badly hurt."

Saw Her Daughters Killed.

On the second floor of the improvised hospital was Mrs. Horace Trump. Mrs. Trump was at the bedside of a sick sister with her year-old baby in her arms, her four-year-old daughter being near her on the floor, when she saw the storm, but it was impossible for her to get out of the room, so sudden was the approach. The storm in all its fury struck the house and the flying missiles struck her, knocking down the walls of the building over her two daughters, killing the baby and the four-year-old daughter instantly.

Mrs. Trump is considerably bruised and hurt internally, and it is as if by a miracle that she escaped death.

On the Railroads.

Freight trains have all been sidetracked so as to minimize the chances for collisions and accidents to the passenger trains. All the northbound, westbound, and train which can go south by western outlets, are passing over the Merchants' Bridge, which remains practically unharmed. But the Louisville & Nashville, Baltimore & Ohio, Cairo Short Line, Mobile & Ohio, Illinois Central, Washburn Eastern, L. E. & St. Louis, the Big Four and all the roads running east or south, are blocked.

Not only is the Eads bridge impassable, but the railroad yards in St. Louis, the Relay Depot, the whole network of tracks and switches from the Mississippi River east, northeast and south as far as Platteville, are impassable for traffic, and will probably remain so for several days. It is reported that over a dozen heavily loaded passenger trains coming from the East and South were caught last night and this morning in the cyclone, and are either derailed or blocked from three to ten miles out on the prairies of Illinois.

Desolation of the River Front.

The scene along the river front this morning was one of wild chaos. Here the tornado struck with great fury, and of all the craft that had been at their piers yesterday afternoon few remained in their berths.

Daylight revealed scores of vessels tossed about on the Mississippi. For miles up and down the river wreckage was strewn, and many a boat was missing.

A large quantity of wreckage was seen from Jefferson Barracks last night floating down the river. A procession of wrecks seemed to be borne along, sometimes singly, sometimes in a tangled mass. One large steamboat, with black smokestack, with only her bow and pilot house above water, was seen going down stream at about 6:30 p. m. There was no sign of life upon her.

Carried Down the Stream.

A barge, with a deck house upon it, and bearing fifteen or twenty people who were flying waving lanterns for assistance, floated along. Shortly after a tugboat came in pursuit, and it is thought the runaway barge was captured.

The anxiety of hundreds was relieved at 8:50 o'clock this morning when the steamer Great Republic anchored at the foot of Olive street. The big triple deck passenger boat left yesterday afternoon with about 300 women and children on board. It was feared she was lost, and her safety caused general rejoicing.

The J. J. Odell, of the Illinois Packet line, was blown from her berth at the foot of Morgan street, yesterday afternoon. A few moments later she crashed into a pier of the Eads Bridge. Then an explosion was heard as her boilers blew up and she slowly sank.

Six Saved Out of Sixteen.

She had a crew of twelve men and carried three women passengers, besides her captain, George Townsend. Three of her crew reached the shore in safety, while three others made their way to the bridge. The rest were drowned.

left between the Eads Bridge and Spruce street. Both of these were shopped up the bank, which would indicate that the storm had a rotary motion, as all other craft were blown in the other direction. Three boats of the Anchor Line were in port.

One of these was the City of Monroe, which was ready to leave for New Orleans. She had a large crew and about thirty-five passengers. She was badly wrecked in her upper works and blown across the river, where she lodged nearly opposite the foot of Chicago avenue. It is reported that her passengers and crew are safe.

The other boats were the City of Cairo and the Arkansas City. They were moored at the foot of Chicago avenue and Carroll street, respectively. They were torn loose and no word has yet been received from them up to midnight. Being temporarily out of commission, they had but few employees aboard. This company also had a number of barges blown away and probably sunk.

Saved the Women's Lives.

The Dolphin No. 2, belonging to the Dolphin Transportation Company, was torn loose from her moorings, at the foot of Carr street. She was turned upside down and sunk in midstream, nearly opposite the foot of Olive street. On board were three men and two women, the latter Jennie Mitchell, cook, and Emma Nolan, chambermaid.

The women and the men climbed to the upper decks. When the boat struck the Eads Bridge, those on board had to dodge to escape the ironwork of the structure. Jennie Mitchell was the first to climb on the iron work. She was assisted by two of the men, while the mate stayed on deck to help Emma Nolan.

As the latter swung herself to the beams the boat drifted away and sank. Slowly, with the wind blowing at a force that caused the big structure to rock like a cradle, the men assisted the women on the laborious climb to the roadway. Several times they were nearly blown off.

They finally reached the railroad track on the bridge, where they lay down until the full force of the storm was past. Then they crawled to the Washington avenue station.

Swam Ashore with a Boy.

On the Libbie Conger, which was ground to pieces on the Illinois shore, were Captain Seaman and his wife and child, a little boy aged five. When the storm first appeared a negro whose name is unknown took the child up in his arms and plunged overboard. He reached the Illinois shore in safety with his burden. Captain Seaman rescued his wife.

This morning John McDowell, a restaurant on the tug Reliance, which is performing great work among the boats which lie the Illinois bank for miles down the river, returned to the city.

He was burdened with messages to loved ones in this city; from fathers and brothers, telling of safety. They reported that the McDowell had been blown to pieces and that the crew swam ashore. He said he thought that every man of the crew escaped.

Ferryboats Blown to Pieces.

He reported that the ferryboats at the foot of Anna street at East Carondelet had been blown to pieces and gone to the bottom with their crews and passengers. This could not be verified.

The St. Louis & Mississippi Valley Transportation Company had two boats, the Exporter and the Harvester, the best of the line, straddled, also the main wharfboat and a number of barges. One of the boats was reported to be sunk at the foot of Arsenal street.

The tug Rescue, No. 2, belonging to the Wiggins Ferry Company, is reported to be sunk at the foot of Olive street.

TORNADO'S WIDE PATH.

Great Damage Done in Three Western States, and Houses Unroofed in the National Capital.

Granite City, Ill., May 28.—As train No. 8 of the Merchants' Terminal pulled out at 6:35 p. m. yesterday, it was struck by the second division of the hurricane, and was carried from the track, overturning six coaches, containing 340 passengers.

Robert Miller, foreman of the rolling department of the Niedringhaus Mills, sustained injuries from which he died. Miss Nellie Heggenman received injuries which may prove fatal. All the other passengers escaped without injury, except about forty, who received a few scratches.

Quincy, Ill., May 28.—A heavy windstorm struck this section at 3:20 o'clock yesterday afternoon. The ferryboat Frank Sherman was out in the river when the gale struck her. She tossed about on the water like a chip of wood, until finally she drifted ashore. Then it was found that John Hustley, the pilot, was dead, his hands still clutching the spokes of the wheel. It is the general opinion that he died of heart disease, brought on by excitement resulting from the storm.

At Vandalia, it is believed that at least twenty persons were killed by the storm. St. Louis, May 28.—Meagre reports of the cyclone's fury in Missouri yesterday are being received. At 2 o'clock yesterday afternoon the cyclone struck Booneville, in the northern part of the State, and destroyed everything in its path. Several persons were fatally injured.

In the vicinity of Ladonia, Mo., ten persons are reported killed.

Mount Vernon, Ind., May 28.—This place has been nearly destroyed by a tornado which struck here at 10 o'clock yesterday.

and two persons were killed. All Louisville and Nashville trains have been abandoned.

Indianapolis, May 28.—Reports received here from various points where the tornado passed increase the total number of the dead. The tornado at noon was reported to be moving almost due east. A special train of surgeons started at that hour for the scene of the disaster.

Washington, May 28.—At half-past 3 a violent thunder storm, accompanied by a wind averaging fifty miles an hour, passed over this city. The path of the wind can be traced through the White House grounds by the fallen trunks and branches of trees. A space less than a hundred yards wide marked the progress of its fury. The wind took the roof off the Lutheran Memorial Church, at Vermont avenue and Fourteenth street. Trees were blown down in every part of the city, and many small houses were unroofed.

MANY OFFERS OF AID.

St. Louis Receives Prompt Sympathy from Sister Cities and Assistance from Congress.

The calamity which has befallen St. Louis has called forth prompt and generous messages of sympathy, coupled with offers of substantial aid to the sufferers from many of the larger cities of the East.

From New York this message, signed by Mayor Walbridge, of St. Louis:

"We have learned with sincere regret of the calamity that has visited your city, and I, as Mayor of the City of Philadelphia, extend to you the heartfelt sympathies of the citizens of our city in your hour of need."

Similar messages were telegraphed by the Mayors of Boston, Haverhill, Haverhill, and Cincinnati. All contained offers of aid, if aid be needed in St. Louis, and if Mayor Walbridge so replies, public meetings will at once be held in each of the cities named in order to raise funds.

In Washington Missouri's Representatives were most active. Mr. Bartholdt yesterday morning called at the War Department, and later introduced in the House a resolution authorizing the Secretary of War to loan to the Mayors of St. Louis and East St. Louis a sufficient number of tents to afford temporary shelter to such persons as have been left homeless by the cyclone, and to render such other relief as may be in his power.

The resolution was agreed to, and at once sent to the Senate. Mr. Vest, of Missouri, in discussing it there, said that he did not believe the action called for in the resolution was at all necessary, as the States of Missouri and Illinois were amply able to take care of themselves. However, as the House had agreed to it, he would not oppose its passage in the Senate.

The resolution was accordingly passed as a joint resolution, and sent to the President, who immediately signed it.

In addition to this contemplated relief Assistant Secretary Doe has directed General Wright, chief of engineers, to telegraph instructions to the engineers of the Jefferson City, Chamolis and Keokuk, to render all assistance in their power to the people of St. Louis and vicinity. The boats of the Engineering Department will be used in the work of relief.

STORM ARRIVES HERE.

The St. Louis Tornado, Weaker and Not Destructive, Resches New York.

The cyclone, of which the death-dealing tornado at St. Louis was the most remarkable feature, reached New York yesterday, and high winds, rain and electrical disturbances marked its passage. There is likely to be more stormy weather to-day. Weather Prophet Dunn says, though, that whatever disturbances there may be will be slight and will be the dying efforts of the elements, which nearly exhausted their fury before they reached the Allegheny Mountains.

From Delaware to Maine danger signals were displayed in all seaport cities yesterday, and mariners were warned that there would be high southeasterly winds and that local storms, dangerous to life and shipping, might spring up at any moment. Besides the warning to vesselmen, which was especially strong, danger signals were displayed at many points along the seaboard where local storms of unusual severity seemed imminent. These also were a result of the cyclone, which in its eastward trip, had spread out so as to cover nearly all the Middle Atlantic and New England States.

A portion of it which broke loose from the main body after crossing the Mississippi River is now cavorting around in Southern Ohio, Kentucky and Tennessee, and still another part has moved down into the lower Mississippi Valley States. These branches of the storm, however, do not seem to contain elements of danger, and all that is expected of them is heavy rains with fairly high winds.

The main part of the cyclone which headed for the East is likely to break out at any moment. None of the tornadoes and electrical storms which marked it in its westward trip, however, are expected to be so destructive as the one at St. Louis.

Bergen Beach Opens To-day. Flat-bush ave., Nottstrand ave., Lorimer at, cars direct to 47th.

The West came East with it. They were purely local, and exhausted themselves almost where they formed. Similar disturbances are likely to be caused close to New York, though Mr. Dunn does not think that any of sufficient violence to cause widespread ruin are likely. To prevent any loss of life he sent out warnings yesterday in which he notified residents of Northern New Jersey, Southern New York and Connecticut that the local atmospheric conditions were such as to render the forming of a tornado not improbable. As a notice, however, he added that the storms, if they should form, would not be so destructive as the one at St. Louis.

Many people have had an idea that, owing to the highlands close about New York, a destructive tornado is out of the question in this city. Such is not the case, however, according to Weather Man Dunn. He says that while the highlands afford protection against cyclones, which gain in destructive force as they sweep over wide expanses of open space, the mountains do not entirely hinder the formation of tornadoes, which are caused purely by atmospheric disturbances.

For today Mr. Dunn predicts weather much like that of yesterday, and growing cooler steadily until to-morrow.

Cyclone Passes Out to Sea.

From a scientific point of view, the tornado which brought death and destruction of property to St. Louis was only an incident in the cyclone which has been working its way across the continent for the last few days, and which is now passing out upon the Atlantic. To Mr. Dunn and the other experts of the Weather Bureau, a cyclone means a storm accompanied by high winds, rains and all manner of atmospheric disturbances extending over a wide stretch of country. A tornado is only one of the results of the upsetting of the atmospheric equilibrium of the cyclone, and while it is much more destructive than the storm which caused it, it is short-lived and usually expends its force in a very limited area. The tornado is practically nothing but a whirlwind, such as causes a waterspout at sea or a sand-pillar in a desert. It is an exaggerated form of the little whirlwinds which form on city streets and cause dust eddies.

"There have been many tornadoes in the West in the last few days," said Weather Man Dunn, "though all have been overshadowed in their destructiveness by the one at St. Louis. These tornadoes have formed on the southeast quadrant of the general cyclonic storm, they're caused by the warm air from the South coming in contact with the storm centre and the colder currents from the North and Northwest. At the point where these different currents meet the tornado forms."

Causes of the Storm.

"It is nothing but the disturbance caused by the intermingling of the cold and warm air currents. The warm air undercuts the colder, and in trying to find an outlet by which it can rise to its proper level it causes the general upsetting of the atmosphere. The tornado is only one of the accompanying features of a storm, and is never independent of it. Dust whirls such as we see frequently may be due to heated air, but they never reach the size that renders them in any way dangerous."

"The destructiveness and violence of the tornado is proportionate to the difference in the temperature of the currents of air which cause it. When the temperature has become equal the tornado dissipates. The great power in the tornado is in its funnel. This varies in diameter at the base from 5 yards to 200 yards. It is seldom that this funnel, which is simply a terrible whirlwind, preserves its identity long. One is on record which traversed a tract of 200 miles of country before it was broken up. It is seldom, however, that one travels more than a mile. Tornadoes are usually formed during April, May, June and July. Some form during the hot months later in the year, but they are never so destructive."

"The St. Louis storm was predicted by E. B. Garriott, in charge of the Chicago weather bureau, twenty-four hours before it occurred. Warnings were sent out through the territory threatened."

TORNADOES AND CYCLONES.

How They Differ and What Each One Can Do—Strange Freaks of the Wind.

The St. Louis storm was a tornado. The use of the word "cyclone" in connection with a storm which turns or whirls.

It is the spiral motion which gives the tornado its deadly power. The cyclone will often blow down houses and throw trains of cars from the tracks, but it always travels from the ground, and it always levels objects. The tornado drives timbers into the ground like stakes, forces marble slabs through wooden and brick walls and rips granite masonry apart as if it were pasteboard. The whirling motion of the wind in the centre of the funnel of a tornado is said to reach a speed of 2,000 miles an hour. But its forward movement is rarely more rapid than thirty-five miles an hour. The cyclone, however, in contradiction to the tornado, may reach a forward speed of ninety miles an hour, while it does not whirl at all.

A tornado is the home of both the cyclone and tornado, and both of them are with us to stay, too. Scientists say that the destruction of forests adds to the danger from wind storms.

A tornado on land is of the nature of a waterspout at sea. A waterspout collapses the moment a heavy gun is fired. This has been so clearly demonstrated, that in tropical latitudes nearly all ships carry a cannon for the purpose of shooting waterspouts.

A tornado on land can, scientists say, be dissipated in the same manner. Acting on this principle, Eugene Turpin, in 1822, patented a device to fight tornadoes. Briefly stated, his plan was to establish aerial torpedoes, fixed on high towers, as electric lights are in many Western cities, and so placed that an explosion would be caused by the automatic action of the tornado itself. The inventor estimated that, to protect a city three miles in diameter, it would require an expense of about \$30,000.

May is the worst month in the year for tornadoes. They begin when warm, moist air sinks beneath a stratum of cold, dry air. Such a condition will produce a whirling wind. If the causes are unimportant, it may be only one of those little whirlwinds which suck the dust into a widening spiral from city streets. If they are important they may develop into the kind of storm which wrecked St. Louis.

Manhattan Beach.